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LPC 1971100002-Will
CELOTEX
ILD 981961634
SF/HRS

CERCLA
Site Inspection Prioritization Report

Illinois Environmental Protection Agency

2200 Churchill Road
P. O. Box 19276
Springfield, IL 62794-9276

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C	Target Compound List & Data Qualifiers
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VOLUME 2

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1. SITE BACKGROUND

1.1 INTRODUCTION

On September 30, 1994 the Illinois Environmental Protection Agency's (IEPA) CERCLA Site Assessment Program was tasked by the U.S. Environmental Protection Agency (USEPA) to conduct a Site Inspection Prioritization (SIP) of the Celotex Corporate Dump Site.

This investigation was undertaken by the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 40 CFR, 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986.

The Celotex Dump Site located in Wilmington, Illinois was initially placed on the Comprehensive Environmental Response Compensation and Liability Inventory System (CERCLIS) in response to the State of Illinois concerns that past site activities may have caused soil and sediment contamination of the surrounding community, on-site wetlands and the Kankakee River.

In May of 1995 the Illinois EPA's CERCLA Site Assessment Unit prepared a Site Inspection Prioritization Work Plan for the Celotex Corporate Dump Site which was submitted to the Region 5 Offices of USEPA for review. A site safety plan was also prepared at this time and after being reviewed by the Illinois EPA's Office of Chemical Safety, the field activity portion of the inspection occurred on June 15, 1995. The CERCLA Inspection included the collection of 10 sediment samples, four of which were analyzed for dioxins.

1.2 SITE DESCRIPTION

The Site is located just east of the Kankakee River on Kankakee Street in Wilmington, Illinois. Celotex operated a solid waste disposal site on a 40 acre parcel of land located at the Northwest 1/4 of the Northwest 1/4 of Section 25, Township 33 North, Range 2 East, in Will County. This disposal area consists of two landfills, two surface depressions, and several unlined disposal lagoons. The landfills appear to be inactive, partially covered and vegetated. The lagoons contain three to four feet of clear water and lack emergent and surficial animal and plant life. This entire area is prone to flooding from the Kankakee River on the west and from the Forked Creek to the south. The perimeter of the site has three distinct wetland areas, one to the northeast, one to the south, and one to the southwest. The site is bordered on the northeast and east by residential areas. These residential areas provide several points of access to the site. Man made paths and trails are easily found throughout this area, showing some possible recreational uses of the site. (See Figure 1, Site Location Map and Figure 2, Site Topographic Map.)

1.3 SITE HISTORY

Celotex operated a manufacturing facility on the southern side of Forked Creek from 1955 till the mid-1980's. According to Illinois EPA files the primary products from this operation were roofing shingles and felt paper. Wastes generated from this plant were then disposed of on the above mentioned property and included: off-specification roofing shingles, felt paper, wooden pallets and

liquid sludge from a recycling mill. This liquid sludge is a by-product from the recycling of rags, magazines, wood pulp, and paper.

In 1979 a site visit by Illinois EPA Personnel revealed a load of waste oil staged next to a surface depression and an oil stained area that possibly had wastes deposited there before. In this same year a 30,000 gallon spill of asphalt material at the plant was cleaned up and disposed of at this dump site.

An enforcement case was started in 1978 against Celotex based on a history of compliance violations. This complaint alleged that the waste disposal site used by Celotex (the corporate dump site) was not operated within the current regulations applicable to it. These charges were later dismissed because the Attorney General failed to comply with discovery orders and due to inadequate documentation.

1.4 REGULATORY STATUS

Regulatory involvement at this site is limited to the above mentioned activities by the Illinois EPA and the Attorney General's Office. The Celotex Corporation Dump Site was never regulated under the Resource Conservation Recovery Act (RCRA), and given the nature of the operation, the years it produced roofing materials, and the federal and state environmental regulations which existed during this time, the site in all likelihood would not fall under the jurisdiction of the Atomic Energy Act (AEA), Toxic Substances

Control Act (TSCA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), or the Uranium Mill Tailings Radiation Control Act (UMTRCA).

2 SIP ACTIVITIES

This section contains information gathered during the preparation of the formal CERCLA Inspection and previous IEPA activities involving this site. These activities included the reviewing of Illinois EPA records, preparation of the work plan and interviews with a representative from the Celotex Corporation.

2.1 RECONNAISSANCE ACTIVITIES

In June of 1995, Mr. Mark Wagner met with Mr. Lecil Colburn a representative for the Celotex Corporation and conducted a pre-sampling reconnaissance inspection. This event was conducted to identify the sampling locations and familiarize the sampling team with the site. At this time several locations were found with exposed shingles and associated materials and it was also noticed that the perimeter fence was in poor condition and absent in numerous places. Current site conditions included, heavy vegetation in non-disposal areas, and low water levels in the wetland areas and in the Kankakee River.

2.2 INTERVIEWS

As mentioned earlier Celotex's Environmental Director met with the author just prior to the inspection. At this time CERCLA program

objectives were discussed. Mr. Colburn was familiar with the CERCLA process and exercised Celotex's option to split samples with the IEPA. The dioxin issue was also discussed and he maintained that their operations in Wilmington should not have dioxins associated with them.

2.3 SAMPLING ACTIVITIES

The CERCLA Site Inspection Prioritization field sampling activities took place on June 15, 1995. A total of 10 sediment samples were collected during the SIP from the Forked Creek, Kankakee River, on-site surface impoundment, and on-site wetland areas. Samples were collected using stainless steel trowels and augers. All sampling was performed in accordance with IEPA sampling methods and procedures. The sediment samples were taken to determine if contaminants were present at the facility and if they had migrated from the property. Figure 3 identifies the sample locations from the May 1995 SIP. Sample descriptions are summarized in Table 1.

2.4 SAMPLING RESULTS

All samples were analyzed for TCL parameters. In addition, four of the samples were analyzed for dioxins and furans. Several semivolatile organic and inorganic substances were detected at numerous sample locations. One of these sample locations had dioxin levels three times the background concentrations.

Significantly elevated levels of copper were found at six sample

locations throughout the site, the wetland areas and in the Kankakee River. Five of these six sample locations exceeded the Lowest Effect Level established by the Ontario Standards for Copper. Three of the six sample locations also exceeded the Lowest Effect Level for Manganese. Key samples with levels and contaminants are presented in Table 2. The complete analytical data package for Celotex is located in Appendix E and contains a copy of the Target Compound List (TCL) and data qualifiers used by USEPA.

3 SITE SOURCES

3.1 SOURCE DEFINITION

Two sources can be identified at Celotex, they are a landfill and a surface impoundment.

The landfill was identified in aerial photographs and in a 1989, Screening Site Inspection Report. This area is approximately 22 acres in size and was not an engineered disposal area. This area was utilized after a smaller landfill located to the south was filled to capacity. Runoff from this area collects in two wetlands that each empty into the Kankakee River. Inorganics, mainly copper have been detected along both of these surface water paths. In Figure 3. it is referred to as the recent landfill.

As mentioned earlier the smaller landfill was the original area used for disposal by Celotex. Leachate sampled from it did not reveal the elevated levels found in the larger landfill. This area

is prone to flooding from the Forked Creek. Several feet of various materials now cover this smaller landfill.

The surface impoundment is also visible in the aerial photographs. It is approximately one acre in size and is located at the north western edge of the above mentioned landfill. It appears that this impoundment originated as a low-lying area and was used to dispose of asphalt and other unknown materials. Dioxins and furans were detected in a sediment sample from this impoundment.

4 MIGRATION PATHWAYS

4.1 SURFACE WATER PATHWAY

The surface pathway starts where surface water run-off from the site enters the first perennial water body. This location is referred to as the probable point of entry (PPE). Celotex has two probable points of entry due to the location of the on-site wetlands. The points where surface water runoff enters these wetlands are the probable point of entry for the site.

These wetlands are contiguous to the Kankakee River, which is a fishery. The 15 mile Target Distance Limit for this water body is a 15 mile stretch that terminates downstream on the Illinois River near Goose Lake. As mentioned earlier several sediment samples had copper levels significantly higher than the Ontario Sediment Guidelines for Lowest Effects.

The wetlands associated with the site are listed by the Illinois Department of Conservation and the United States Department of the Interior. They are classified as a palustrine, forested, broad-leaved deciduous, temporarily and seasonally flooded environments.

The river is also a source of drinking water for the City of Wilmington. The surface water intakes are upstream of the PPE and do not appear to be affected by the site. (See Appendix B, Area Wetland Map.)

4.2 SOIL EXPOSURE PATHWAY

This pathway evaluates surficial contamination and the likelihood that people and sensitive environments will be exposed to them. The site is fenced along its west, south, and eastern sides leaving the north boundary open and accessible to the public. The eastern side of the fence is also breached at the end of Hayden Court. Throughout the site are paths and trails that are well defined indicating frequent use.

The surface of the site has: off-specification products, lose gravels and sands, silty-loams, clay and is sparsely vegetated in the landfill area. All of the landfilled areas appear to lack adequate cover material.

Findings from the 1989, Site Inspection revealed the presence of

arsenic, barium, cadmium, chromium, lead, and zinc on the surface of the site. The results from this inspection can be found in Appendix D. Approximately 4500 people live within a one mile radius of the site but there are no schools or daycare facilities within 200 feet of the site.

4.3 GROUNDWATER PATHWAY

Residents using private wells are the primary users of groundwater in the Wilmington area. These wells range from approximately 15-80 feet in depth, (sand and gravel) and approximately 150-700 feet in depth (Silurian Dolomite). Separating these two aquifers is a confining layer of blue shale and blue clay. The shallow sand and gravel aquifer is the aquifer of concern (AOC). Underlying the glacial-drift is the Ft. Atkinson Limestone and Scales Shales, and the Galena and Platteville Groups.

The closest private well is located approximately 2000 feet southeast of the site on the opposite side of the Kankakee River. Well located east of the Kankakee are located approximately 3/4 of a mile from the site. The 1989 Site Inspection did collect three monitoring well samples and found elevated inorganic levels in two of them. Due to the type of contaminants found during the Site Inspection and the location of the private wells no groundwater samples were collected during this SIP.

4.4 AIR PATHWAY

Residential areas border the eastern side of the site. There are no air related complaints on file with the Illinois EPA, and the landfill operation would not generate significant air emissions. No formal air samples were collected but air monitoring was performed for screening purposes. Both the photo-ionization (PID) and flame-ionization (FID) methods were utilized, with the FID being more responsive to the conditions at the site.

Wind erosion of the surface soils is also minimal except during high winds due to the particle size and soil types of the contaminated soils.

SAMPLE DESCRIPTIONS TABLE 1

Celotex Corp.
Dump

TABLE 1

SAMPLE #	DEPTH	APPERANCE	LOCATION
X201	0–4 inches	sandy, silt	Wilmington Park Wilmington, IL
X202	0–4 inches	sandy, silt dark brown	100 feet from Kankakee River @ the PPE, near the waste water plant
X203	0–4 inches	decaying matter silt	up stream of X202, drainage collection area from the site
X204	0–6 inches	sandy, silt	southern end of forested wetland
X205	0–6 inches	clay, silt	573 feet from X204, moving down stream in the forested wetland
X206		duplicate of X205	
X207	0–6 inches	silt	30 foot by 45 foot basin, near a city sewer line
X208	0–6 inches	sandy, silt light brown	center ponded area has a deep layer of asphalt
X209	0–5 inches	sandy, silt	200 feet up stream of the confluence of Forked Creek & Kankakee River
X210		sandy, silt	500 feet up stream of the Kankakee St. bridge on Forked Creek

TABLE 2

SITE NAME: CELOTEX DUMP SITE

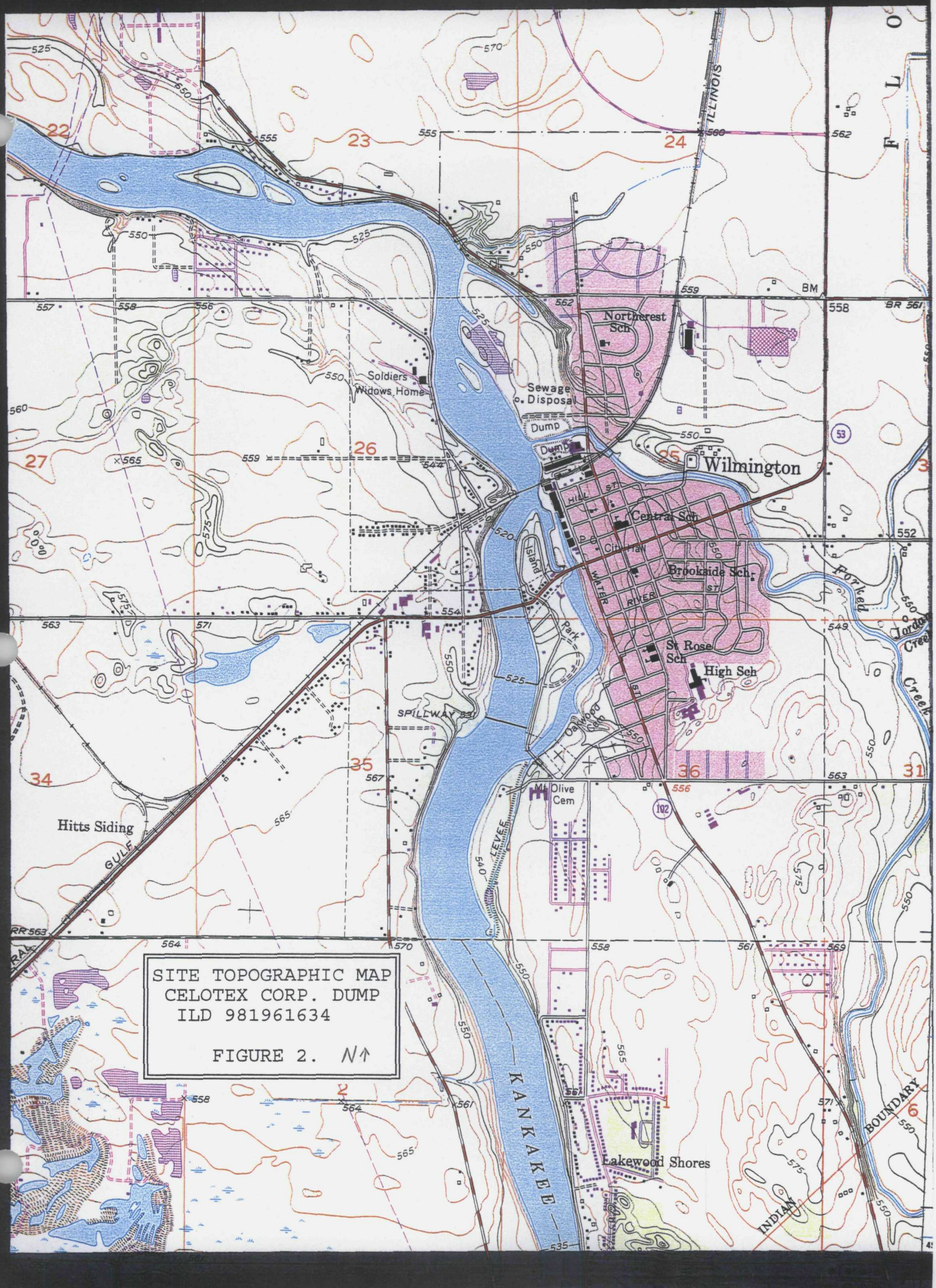
ILD 981961634

SAMPLING POINT / PARAMETER	X201	X202	X203	X204	X205	X206	X207	X208		X209	X210
VOLATILES (ppb)											
Acetone	15U	17U	130	18U	16U	15U	65	30	Acetone	47	12U
1,1,1-Trichloroethane	15	17U	20U	47	16J	15U	16U	15U	1,1,1-Trichloroethane	7J	13
SEMIVOLATILES (ppb)									SEMIVOLATILES (ppb)		
Anthracene	480U	560U	660U	32J	520U	510U	540U	490U	Phenanthrene	100J	400U
Carbazole	480U	560U	660U	580U	520U	510U	540U	490U	Anthracene	530U	400U
Di-n-butylphthalate	480U	560U	51J	580U	32J	33J	540U	490U	Carbazole	530U	400U
Butylbenzylphthalate	480U	38J	660U	580U	520U	510U	540U	490U	Di-n-butylphthalate	34J	29J
3,3'-Dichlorobenzidine	480U	560U	660U	580U	520U	510U	540U	490U	Fluoranthene	360J	400U
bis(2-Ethylhexyl)phthalate	480U	560UJB	120UJB	580UJB	520UJB	510UJB	530UJB	490UJB	Pyrene	250J	400U
Di-n-Octylphthalate	480U	560U	660U	580U	520U	510U	540U	490U	Butylbenzylphthalate	530U	400U
Indeno(1,2,3-cd)pyrene	480U	46J	39J	580U	520U	26J	42J	490U	3,3'-Dichlorobenzidine	530U	400U
Dibenz(a,h)anthracene	480U	560U	660J	580U	520U	510U	540U	490U	Benzo(a)anthracene	120J	400U
Benzo(g,h,i)perylene	480U	44J	44J	3000	38J	510U	360J	490U	Chrysene	140J	400U
									bis(2-Ethylhexyl)phthalate	530UBJ	400UJB
									Di-n-Octylphthalate	530U	400U
									Benzo(b)fluoranthene	120J	400U
									Benzo(k)fluoranthene	120J	400U
									Benzo(a)pyrene	110J	400U
									Indeno(1,2,3-cd)pyrene	67J	400U
									Dibenz(a,h)anthracene	530U	400U
									Benzo(g,h,i)perylene	68J	400U
INORGANICS (ppm)											
Aluminum	4130	7650	14700	8280	15600	14600	11500	10500			
Arsenic	3.9	7.5	6.5	6.5	8.4	8.3	6.6	5.8			
Chromium	6.6	11.9	21.7	13.3	20.9	19.6	16.4	14.9			
Copper	5.2	17.4	27.7	16.8	19.8	19.0	19.3	12.0			
Lead	12.3	17.8	25.4	21.1	24.9	23.6	16.7	10.6			
Magnesium	10300	9450	8450	8460	6490	6390	5490	15200			
Manganese	73.2	597	157	150	549	579	192	1310			
Vanadium	10	15.4B	27.5	17.2	27.4	26.5	20.1	20.1			
Zinc	31.5	66.9	101	69.7	101	96.0	88.1	65.1			
DIOXINS/FURANS (ppb)											
OCDD	2.8	0.42 JS	not analyzed	not analyzed	not analyzed	not analyzed	0.37	10			
OCDF	1.0J	0.19U	not analyzed	not analyzed	not analyzed	not analyzed	0.18U	8.7			

INORGANICS (ppm)	X209	X210
Aluminum	5760	6400
Arsenic	4.3	2.6
Chromium	8.4	8.7
Copper	11.2	10.7
Lead	17.6	14.7
Magnesium	6020	6010
Manganese	93.9	81.3
Vanadium	13.4	11.1
Zinc	50.3	40.7

SITE LOCATION MAP
CELOTEX CORP. DUMP
ILD 981961634

FIGURE 1. N↑



SITE TOPOGRAPHIC MAP
CELOTEX CORP. DUMP
ILD 981961634

FIGURE 2. N↑

FIGURE 3.

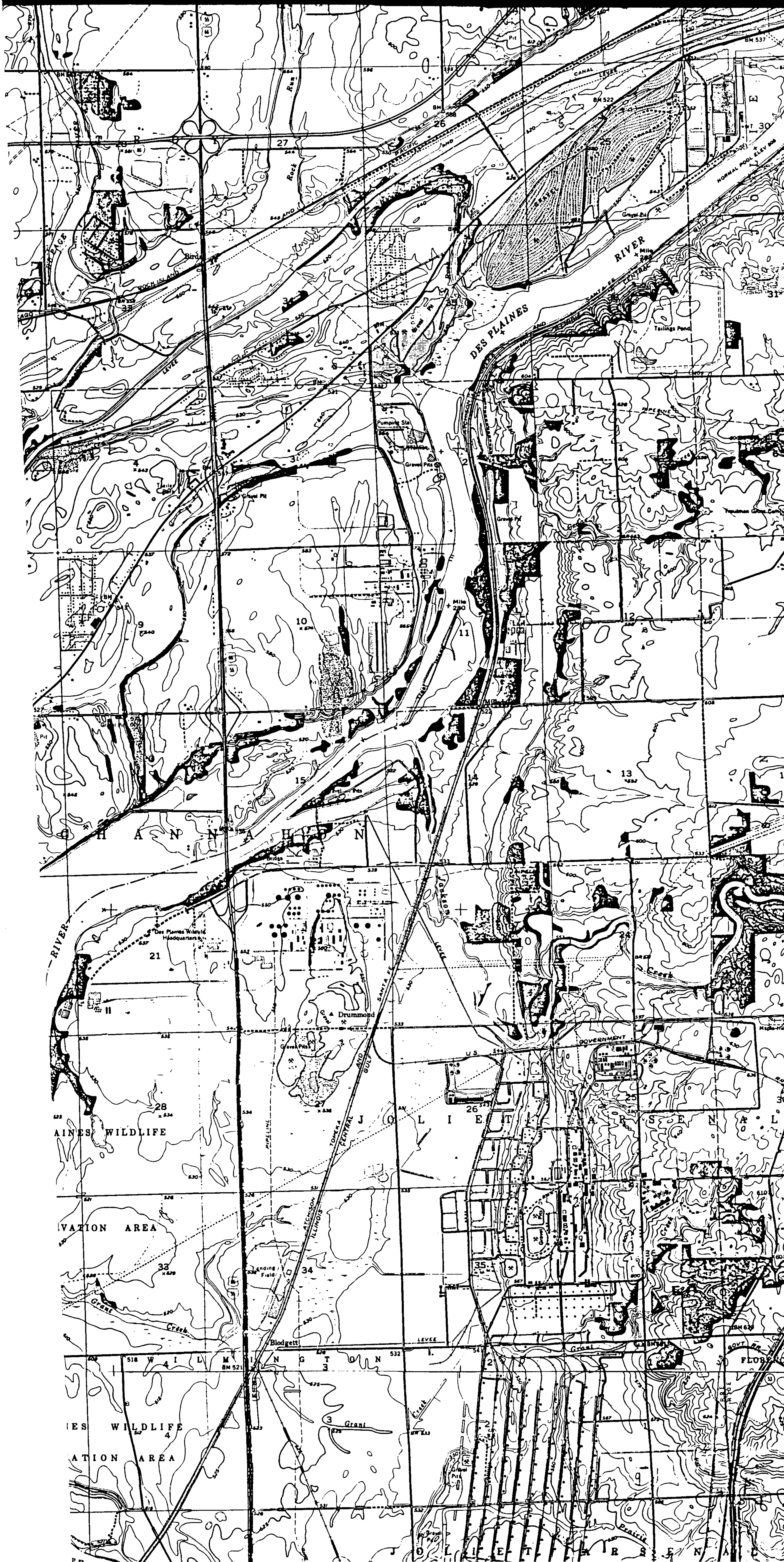
CELOTEX CORP. DUMP SITE
ILD 981961634
1988 AIR PHOTO

N↑

APPENDIX A
4 MILE RADIUS & 15 MILE SURFACE WATER MAP

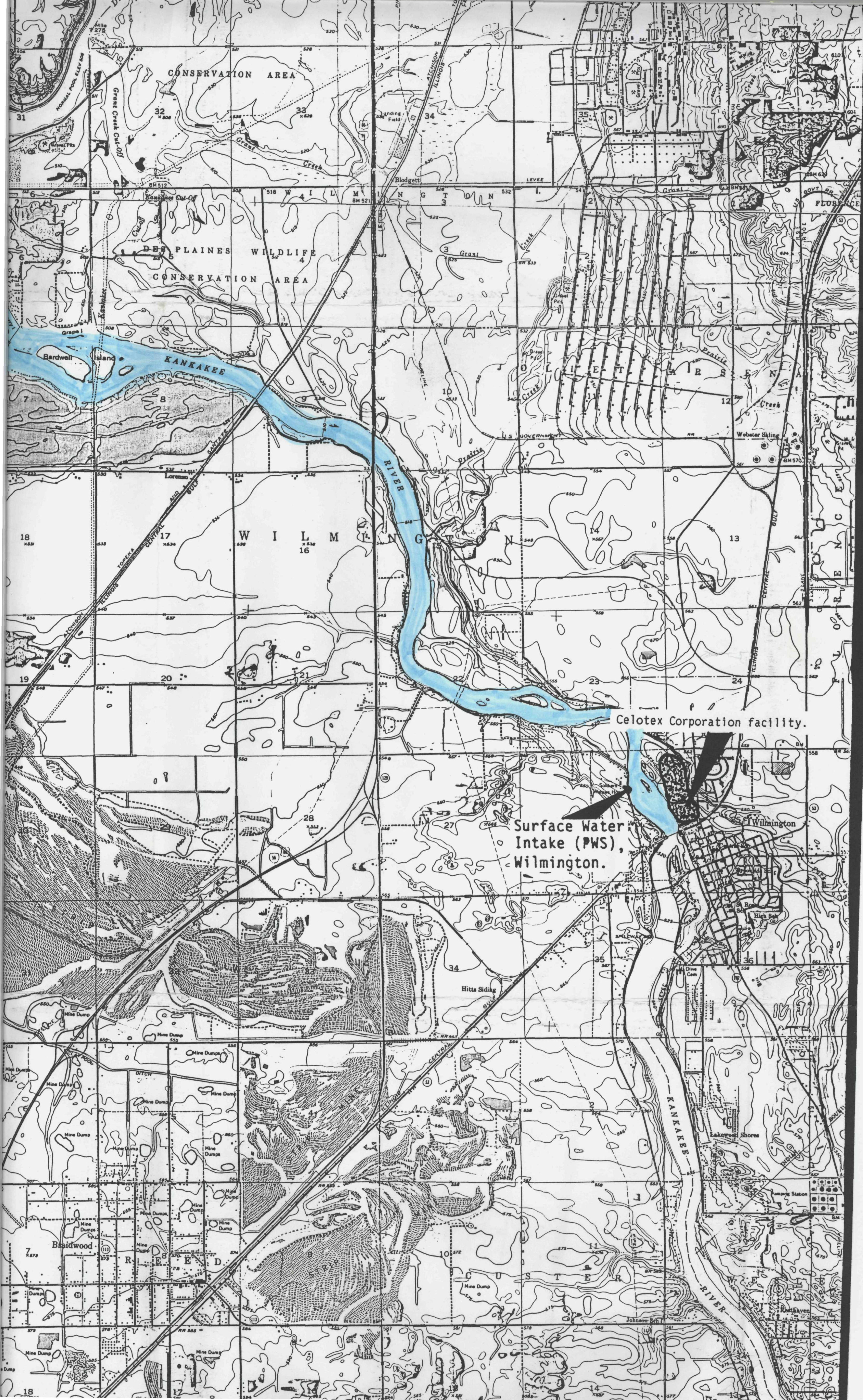
15 Miles Downstream


Minooka
Channahon
DU PAGE RIVER
DES PLAINES RIVER
KANKAKEE RIVER
NORMAL POOL ELEVATION 505
NORMAL POOL ELEV 505
DES PLAINES WILDLIFE CONSERVATION AREA
Des Plaines Wildlife Headquarters
Skinner Island
Powerplant
County Line Bridge
Mulberry I
Grape I
Bardwell Island
Kankakee Cut-Off
Grant Creek Cut-Off
Grant Creek
Jackson Creek
Rock Run
Drummond
Blodgett
Landing Field
Pumping Sta
Gravel Pits
Gravel Pit
Tailings Pond
Trailer Park
Willow Grove Cem
KENDALL CO
WILL CO
GRUNDY CO
T 34 N
T 33 N
R 8 E
R 9 E
C H A N N A H O N
W I L M I N G T O N
J O L I E T A R S E N A L
CHICAGO ROCK ISLAND AND PACIFIC
ATCHISON TOPEKA AND SANTA FE
ILLINOIS CENTRAL
GULF
ELGIN JOLIET AND EASTERN
MICHIGAN CANAL
LEVEE
PIPELINE
GOVERNMENT
Mile 273
Mile 274
Mile 275
Mile 280
Mile 283

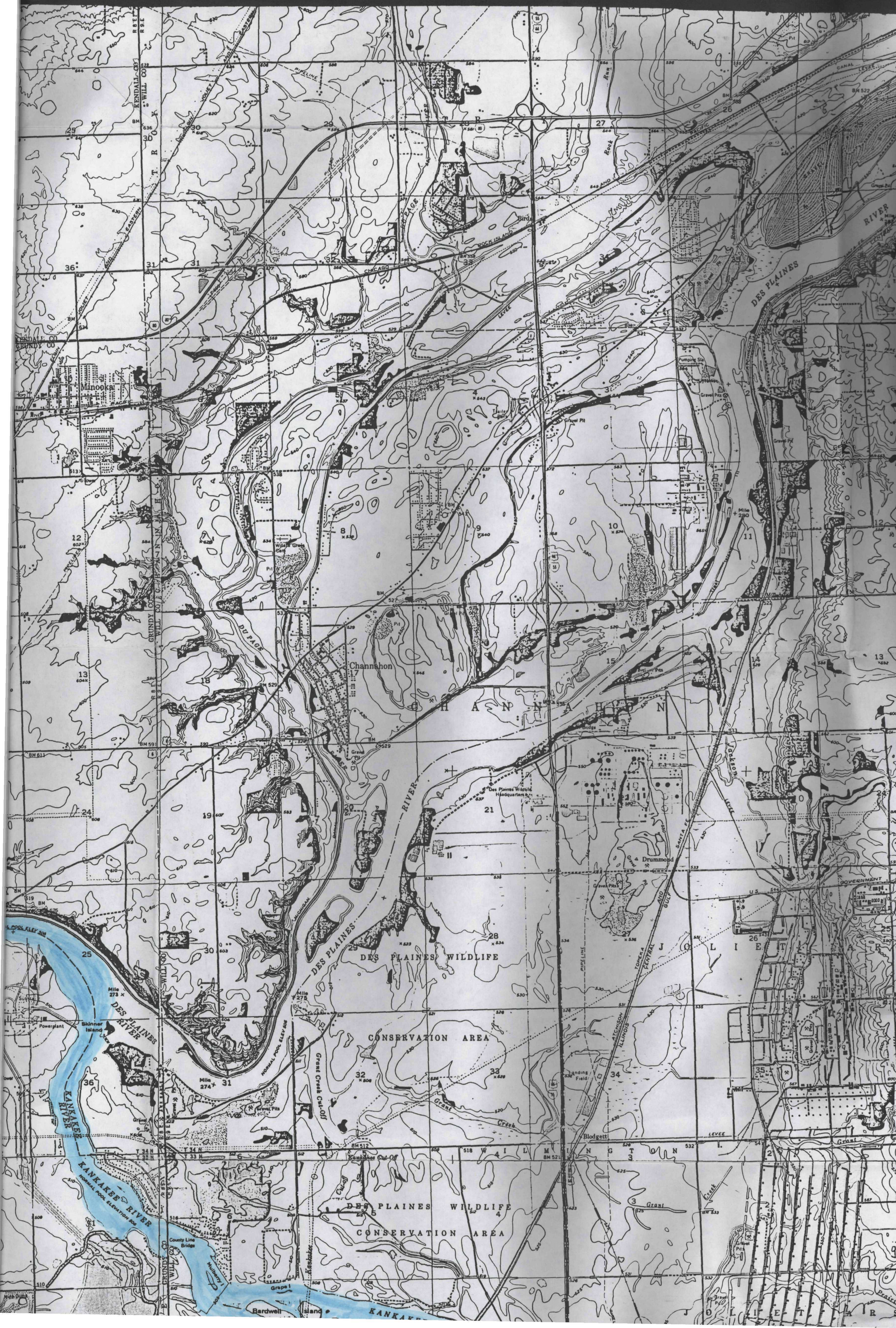

DES PLAINES
RIVER
Tailings Pond
Pumping Sta
Gravel Pits
Gravel Pit
Des Plaines Wildlife Headquarters
Drummond
GOVERNMENT
WILDLIFE
Landing Field
Grant
Creek
Blodgett
LEVEE
FLORENCE

15 Miles Downstream
ILLINOIS RIVER
Mile 268
Aux Sable Island
Mile 267
Mile 270
Mile 273
Aux Sable Sch
Tailings Pond
SARATOGA
AUX SABLE
MORRIS
GOOSE LAKE
GOOSE LAKE PRAIRIE STATE PARK
Divine
Substation
Powerplant
Tower
Skinner Island
DES PLAINES RIVER
KANKAKEE RIVER
NORMAL POOL ELEVATION 505
T 34 N
T 33 N
STRIP MINE
Mine Dump
Pine Bluff Sch
Substa
PIPELINE
MAZON RIVER
WAUPONSEE
Dell Abbey
Short Cem
FELIX
CLAYPOOL DITCH
Carbon Hill
Harrisonville
Eileen
Coal City
Diamond
Trailer Park
Mine Dumps
GULF
ILLINOIS CENTRAL
ATCHISON TOPEKA AND SANTA FE
Gaging Station
Johnny Run
Sulphur Springs Sch
Gorman
MAINE
MAZON
BRACEVILLE

Surface Water Intake (PWS), Wilmington.


Celotex Corporation facility.
Surface Water Intake (PWS), Wilmington.
CONSERVATION AREA
DES PLAINES WILDLIFE CONSERVATION AREA
Grant Creek Cut-Off
Kankakee Cut-Off
Bardwell Island
KANKAKEE RIVER
WILMINGTON
JOLIET ARSENAL
Blodgett
Landing Field
Lorenzo
Webster Siding
FLORENCE
Wilmington
High Sch
Soldiers Widows Home
Hitts Siding
Olive Cem
Lakewood Shores
Pumping Station
Resthaven
Johnson Sch
Braidwood
REED
CUSTER
STRIP MINE
Mine Dump
Mine Dumps
ATCHISON TOPEKA AND SANTA FE
ILLINOIS CENTRAL GULF
US GOVERNMENT RR
LEVEE
SPILLWAY
DITCH

15 Miles Downstream


KENDALL CO
WILL CO
GRUNDY CO
R 8 E
R 9 E
T R O Y
Minooka
PIPELINE
ELGIN JOLIET AND EASTERN
CHICAGO ROCK ISLAND AND PACIFIC
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MICHIGAN
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GRAVEL
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J O L I E T
Gravel Pits
Prairie


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WILL CO
R 8 E
R 9 E
TROY
Minooka
Channahon
CHANNAHON
DU PAGE
DES PLAINES RIVER
RIVER
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Mile 275
Mile 274
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ROCK ISLAND
CHICAGO
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LEVEE
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GRAVEL
Tailings Pond
Pumping Sta
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15 Miles Downstream
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SARATOGA
AUX SABLE
MORRIS
GOOSE LAKE
GOOSE LAKE PRAIRIE
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CLAYPOOL
Mine Dumps
Carbon Hill
Harrisonville
Eileen
Coal City
Diamond
Trailer Park
GULF
ILLINOIS CENTRAL
Gaging Station
Johnny Run
Sulphur Springs Sch
WAUPONSEE
MAZON
MAINE
ATCHISON TOPEKA AND SANTA FE
Gorman
BRACEVILLE

Surface Water Intake (PWS), Wilmington.

Celotex Corporation facility.

Surface Water Intake (PWS), Wilmington.

DES PLAINES WILDLIFE CONSERVATION AREA

KANKAKEE

Island

Cut-off

Kankakee

Grant Creek

BR 333

Gravel Pits

Gravel Pit

Prairie Creek

PIPELINE

JOLIET ARS

U.S. GOVERNMENT

RR

SANTA FE

AND GULF

Lorenzo

RIVER

Prairie

TOPEKA

CENTRAL

ILLINOIS

WILMINGTON

Soldiers Widows Home

Dump

Nearest SURFACE WATER INTAKE

Nearest PRIVATE WELL

SPILLWAY

Dlive Cem

Hitts Siding

GULF

CENTRAL

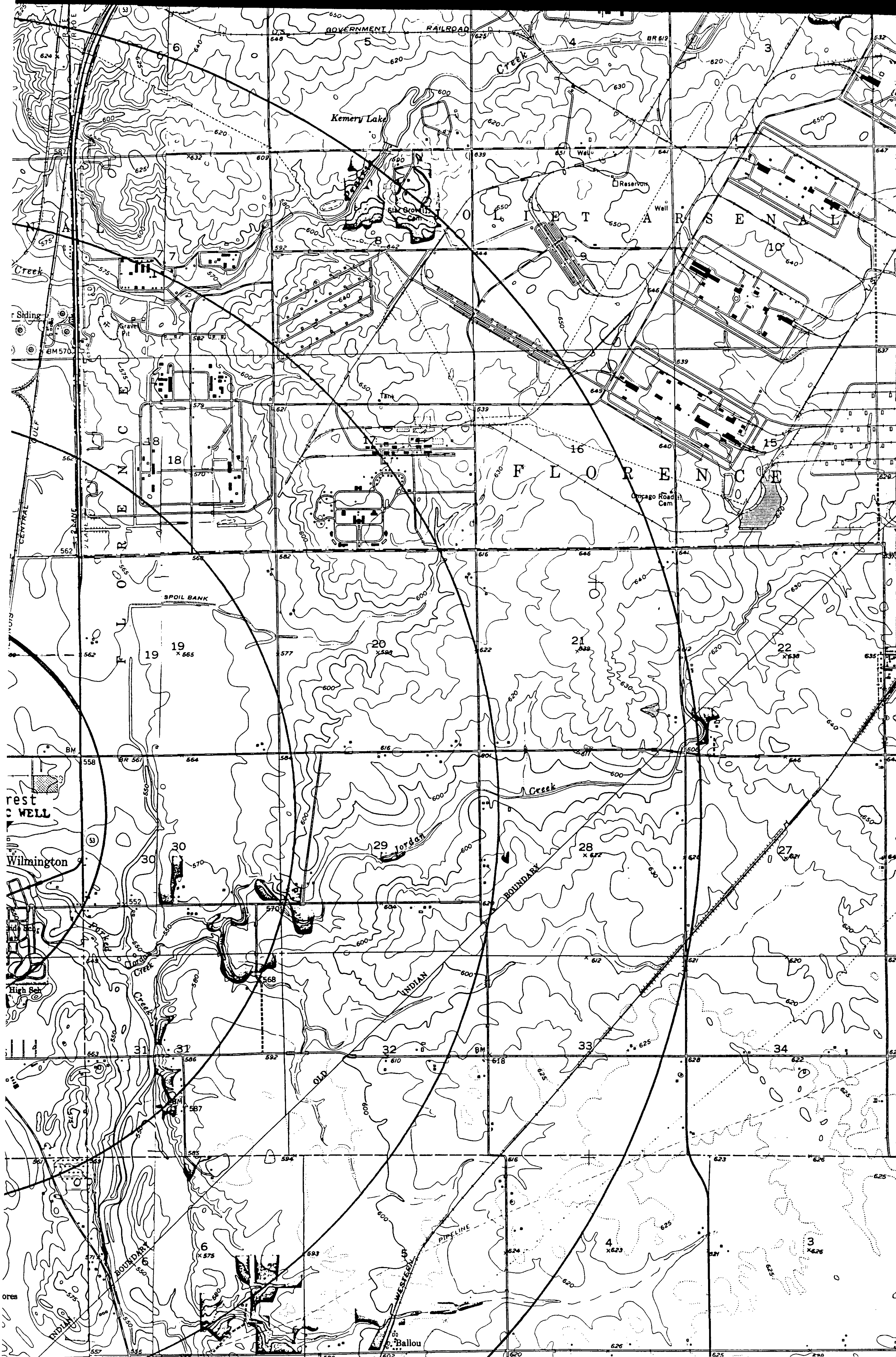
Mine Dump

Mine Dumps

DITCH

KANKAKEE

Nearest
PUBLIC WELL
Nearest
URFACE WATER
INTAKE
Nearest
PRIVATE WELL
Wilmington
Soldiers
Widows Home
Dump
Northeast Sch
High Sch
Brookside Sch
Olive Cem
Lakewood Shores
Ballou
Kemery Lake
Webster Siding
Gravel Pit
SPOIL BANK
Tank
Reservoir
Well
Chicago Road Cem
U.S. GOVERNMENT RAILROAD
ARSENAL
JOLIET A
FLORENCE
FLORE
ILLINOIS CENTRAL GULF
KANKAKEE
OLD INDIAN BOUNDARY
WESTERN PIPELINE
Prairie Creek
Jordan Creek
Forked Creek
Creek
SPILLWAY
LEVEE



GOVERNMENT RAILROAD
Kemery Lake
Star Grove Cem
JOLIET ARSENAL
Reservoir
Well
Tank
FLORENCE
Chicago Road Cem
Creek
Siding
Gravel Pit
SPOIL BANK
Wilmington
Forked Creek
Jordan Creek
Jordan
High Sch
OLD INDIAN BOUNDARY
INDIAN BOUNDARY
WESTERN
PIPELINE
Ballou
CENTRAL
GULF

Lorenzo

WILMINGTON

Prairie

RIVER

TOPEKA AND SANTA FE

CENTRAL ILLINOIS

Nearest SURFACE WATER INTAKE

Nearest PRIVATE WELL

Soldiers Widows Home

Dump

Hitts Siding

Olive Cem

Mine Dump

Mine Dumps

REED

MINE

STRIP

CUSTER

KANKAKEE

Johnson Cem

Bohemian Cem

Illinois Environmental Protection Agency

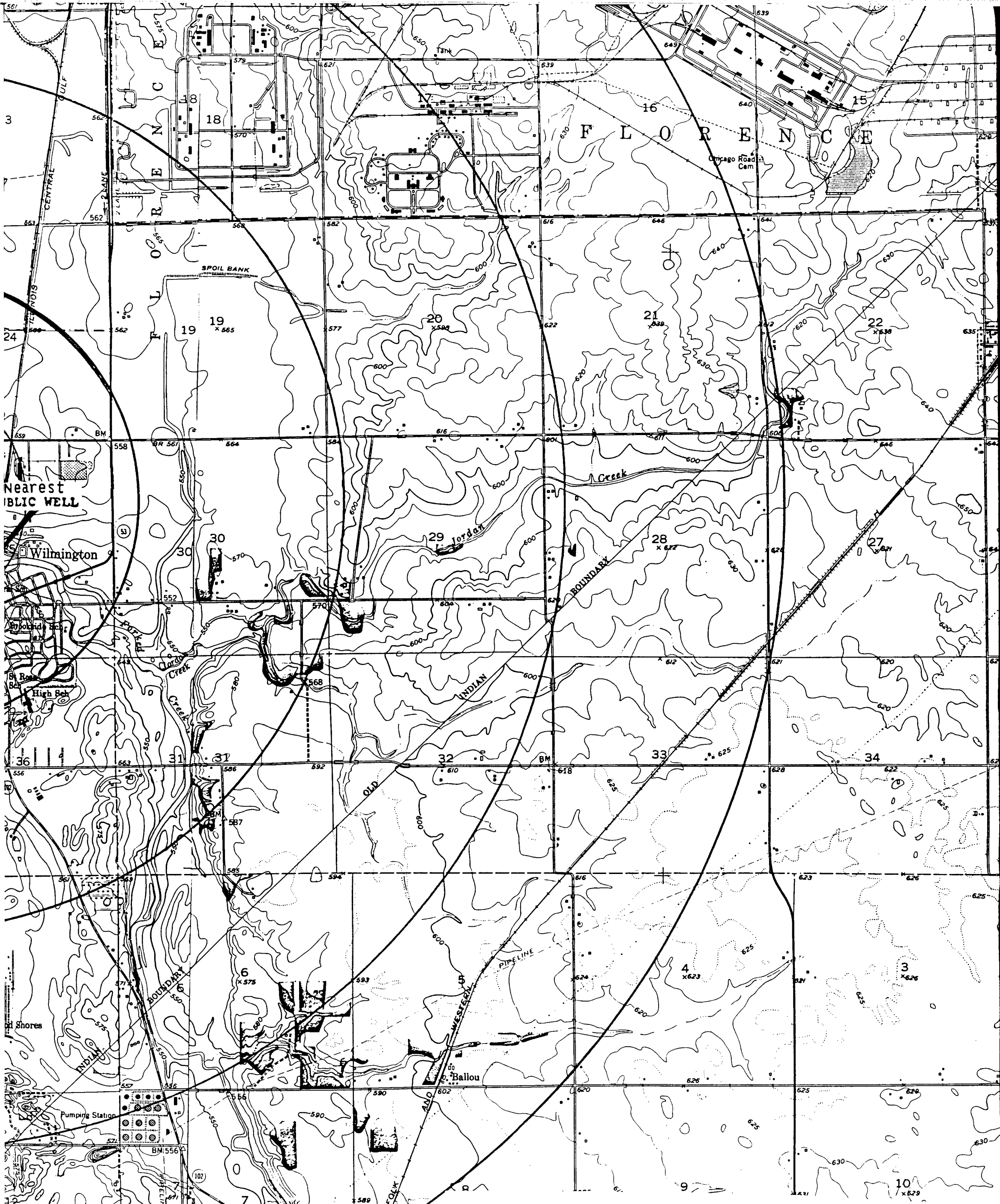
N

SITE
SITE

USGS TOPOGRAPHIC MAPS

NAME WILMINGTON	NAME SYMERTON
DATE 1954	DATE 1953
REVISED 1973, 1978	REVISED 1973
NAME	NAME
DATE	DATE
REVISED	REVISED

MAP SCALE: 1 0 1



Illinois Environmental Protection Agency

SITE NAME Celotex

SITE ILD # 9819615340

USGS TOPOGRAPHIC MAPS

NAME WILMINGTON	NAME SYMERTON
DATE 1954	DATE 1953
REVISED 1973, 1978	REVISED 1973
NAME	NAME
DATE	DATE
REVISED	REVISED

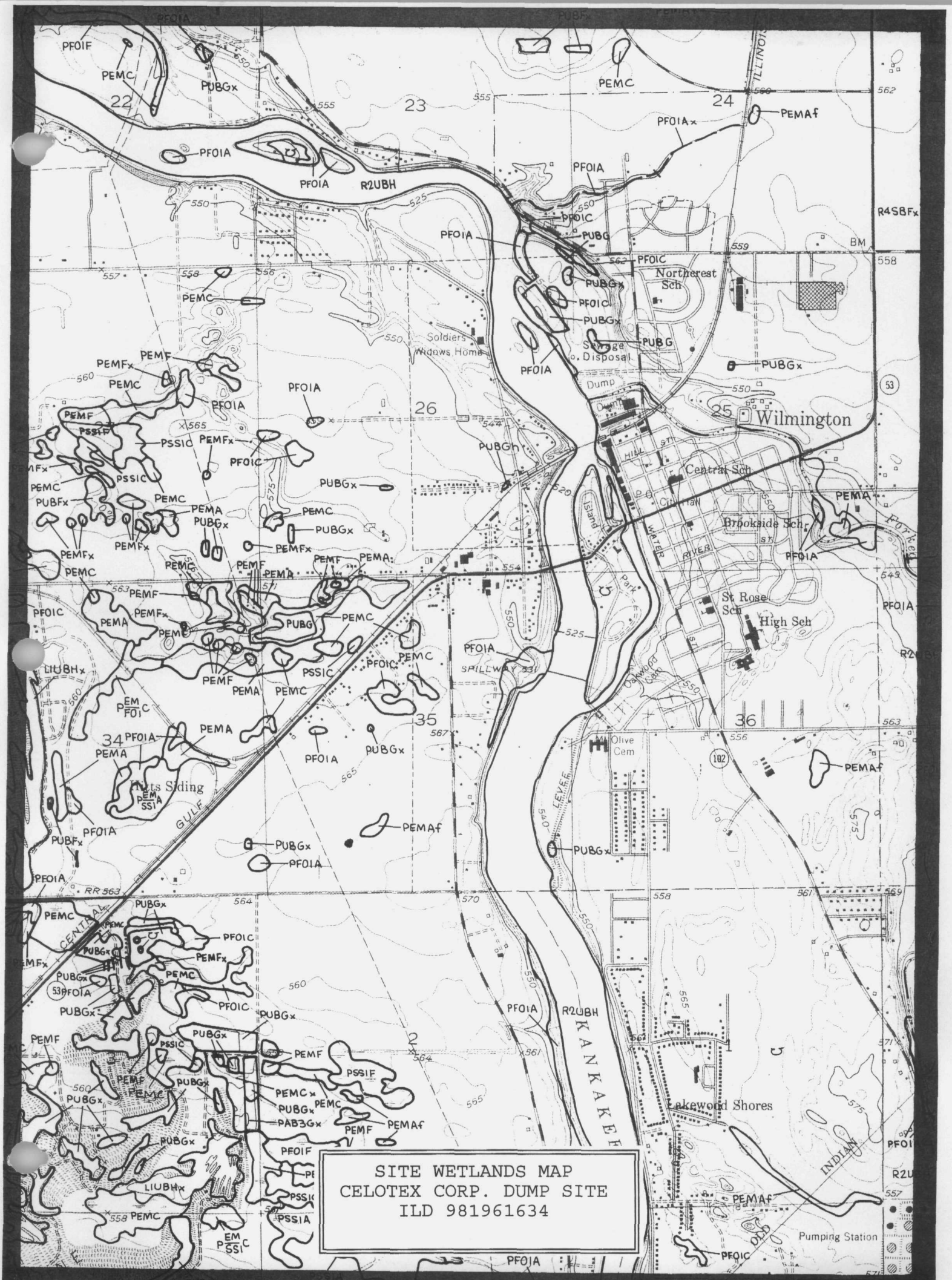
- SITE LOCATION
- PUBLIC WELL
- PRIVATE WELL
- SURFACE WATER INTAKE

ILLINOIS

MAP SCALE: 1 0

QUADRANGLE LOCATION

APPENDIX B
AREA WETLAND MAP


SITE WETLANDS MAP
CELOTEX CORP. DUMP SITE
ILD 981961634
Wilmington
Northerest Sch
Soldiers Widows Home
Sewage Disposal
Dump
Central Sch
Brookside Schr
St Rose Sch
High Sch
Olive Cem
Lakewood Shores
Pumping Station
Nuts Siding
KANKAKEE
GULF
CENTRAL
ILLINOIS
INDIAN
LEVEE
PFO1A
PEMC
PUBGx
PEMAf
R2UBH
PFO1C
PEMF
PEMFx
PSSIC
PSSIF
PUBG
PUBGh
PEMA
PUBFx
LIUBHx
PAB3Gx
PSSIA
PFO1F

APPENDIX C
TARGET COMPOUND LIST & DATA QUALIFIERS

TARGET COMPOUND LIST

Volatile Target Compounds

- Chloromethane
- Bromomethane
- Vinyl Chloride
- Chloroethane
- Methylene Chloride
- Acetone
- Carbon Disulfide
- 1,1-Dichloroethene
- 1,1-Dichloroethane
- 1,2-Dichloroethene (total)
- Chloroform
- 1,2-Dichloroethane
- 2-Butanone
- 1,1,1-Trichloroethane
- Carbon Tetrachloride
- Vinyl Acetate
- Bromodichloromethane
- 1,2-Dichloropropane
- cis-1,3-Dichloropropene
- Trichloroethene
- Dibromochloromethane
- 1,1,2-Trichloroethane
- Benzene
- trans-1,3-Dichloropropene
- Bromoform
- 4-Methyl-2-pentanone
- 2-Hexanone
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane
- Toluene
- Chlorobenzene
- Ethylbenzene
- Styrene
- Xylenes (total)

Base/Neutral Target Compounds

- Hexachloroethane
- bis(2-Chloroethyl)Ether
- Benzyl Alcohol
- bis(2-Chloroisopropyl)Ether
- N-Nitroso-Di-n-Propylamine
- Nitrobenzene
- Hexachlorobutadiene
- 2-Methylnaphthalene
- 1,2,4-Trichlorobenzene
- Isophorone
- Naphthalene
- 4-Chloroaniline
- bis(2-chloroethoxy)Methane
- Hexachlorocyclopentadiene
- 2-Chloronaphthalene
- 2-Nitroaniline
- Acenaphthylene
- 3-Nitroaniline
- Acenaphthene
- Dibenzofuran
- Dimethyl Phthalate
- 2,6-Dinitrotoluene
- Fluorene
- 4-Nitroaniline
- 4-Chlorophenyl-phenylether
- 2,4-Dinitrotoluene
- Diethylphthalate
- N-Nitrosodiphenylamine
- Hexachlorobenzene
- Phenanthrene
- 4-Bromophenyl-phenylether
- Anthracene
- Di-n-Butylphthalate
- Fluoranthene
- Pyrene
- Butylbenzylphthalate
- bis(2-Ethylhexyl)Phthalate
- Chrysene
- Benzo(a)Anthracene
- 3,3'-Dichlorobenzidene
- Di-n-Octyl Phthalate
- Benzo(b)Fluoranthene
- Benzo(k)Fluoranthene
- Benzo(a)Pyrene
- Indeno(1,2,3-cd)Pyrene
- Dibenz(a,h)Anthracene
- Benzo(g,h,i)Perylene
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene

Acid Target Compounds

- Benzoic Acid
- Phenol
- 2-Chlorophenol
- 2-Nitrophenol
- 2-Methylphenol
- 2,4-Dimethylphenol
- 4-Methylphenol
- 2,4-Dichlorophenol
- 2,4,6-Trichlorophenol
- 2,4,5-Trichlorophenol
- 4-Chloro-3-methylphenol
- 2,4-Dinitrophenol
- 2-Methyl-4,6-dinitrophenol
- Pentachlorophenol
- 4-Nitrophenol

Pesticide/PCB Target Compounds

- alpha-BHC
- beta-BHC
- delta-BHC
- gamma-BHC (Lindane)
- Heptachlor
- Aldrin
- Heptachlor epoxide
- Endosulfan I
- 4,4'-DDE
- Dieldrin
- Endrin
- 4,4'-DDD
- Endosulfan II
- 4,4'-DDT
- Endrin Ketone
- Endosulfan Sulfate
- Methoxychlor
- alpha-Chlorodane
- gamma-Chlorodane
- Toxaphene
- Aroclor-1016
- Aroclor-1221
- Aroclor-1232
- Aroclor-1242
- Aroclor-1248
- Aroclor-1254
- Aroclor-1260

Inorganic Target Compounds

- Aluminum
- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Calcium
- Chromium
- Cobalt
- Copper
- Iron
- Lead
- Magnesium
- Manganese
- Mercury
- Nickel
- Potassium
- Selenium
- Silver
- Sodium
- Thallium
- Vanadium
- Zinc
- Cyanide
- Sulfide
- Sulfate

SPECIAL PESTICIDE LIST

2,4-D

Atrazine

Metolachlor -- Dual

Cyanazine -- Bladex

Fonofos -- Dyfonate

EPTC -- Eptam, Eradicane

Phorate

Metribuzin -- Lexone, Sencor

Trifluralin -- Treflan

Diazinon

Alachlor -- Lasso

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

APPENDIX D
1989 SITE INSPECTION ANALYTICAL RESULTS & SAMPLE LOCATION MAP

Celotex Corporation
ILD 981961634

TABLE 4-1
SUMMARY

SAMPLING POINT	G101	G102	G103	S101	S102	X101	X102D	X103	X104D	X105D	X106	X107	X108
PARAMETER	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89	11-20-89
VOLATILES													
Methylene Chloride	--	--	--	--	--	--	--	2.00J	2.00J	4.00J	1.00J	--	--
Acetone	15.00B	68.00B	25.00B	--	60.00B	--	--	5.00J	--	44.00J	230.00B	15.00J	--
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--	14.00	56.00	--	--
Toluene	--	--	--	--	--	31.00	400.00J	--	--	--	57.00	--	--
SEMIVOLATILES													
Phenol	--	--	--	--	--	430.00J	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	1100.00J	840.00J	--	--	--	--	--	--
Benzoic acid	--	--	--	--	--	840.00J	--	--	--	--	--	290.00J	--
Naphthalene	--	--	--	--	--	56.00	340.00BJ	--	--	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	1400B	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	140.00J	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	50.00J	--	--	--	--	--	--	--
Diethylphthalate	--	--	0.40J	0.10J	--	--	--	28.00J	--	--	--	--	--
Fluorene	--	--	--	--	--	78.00J	--	--	--	--	--	--	--
Pentachlorophenol	--	--	--	--	--	140.00J	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	790.00BJ	110.00BJ	75.00BJ	8.00BJ	--	--	99.00BJ	90.00BJ
Anthracene	--	--	--	--	--	2000.00BJ	--	12.00BJ	--	--	--	--	--
Di-n-Butylphthalate	--	--	--	--	--	--	480.00BJ	87.00BJ	7.00BJ	--	--	17.00BJ	13.00BJ
Fluoranthene	--	--	--	--	--	9400.00B	--	100.00BJ	16.00BJ	--	--	150.00BJ	150.00BJ
Pyrene	--	--	--	--	--	7400.00B	--	86.00BJ	24.00BJ	--	12000.00J	210.00BJ	170.00BJ
Butylbenzylphthalate	--	--	--	--	--	--	830J	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	2600.00BJ	--	--	--	--	--	390.00BJ	140.00BJ
Chrysene	--	--	--	--	--	2900.00B	--	--	--	--	--	--	110.00BJ
bis(2-Ethylhexyl)phthalate	1.00J	0.20B	0.80J	--	--	3800.00B	5500B	--	--	55.00BJ	--	--	110.00BJ
Benzo(b)fluoranthene	--	--	--	--	--	930.00J	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	670.00J	--	--	--	--	--	--	--
PESTICIDES													
Heptachlor epoxide	--	--	--	--	--	--	--	--	--	--	--	3.50J	--
Dieldrin	--	--	--	--	--	--	4.00J	1.00J	--	--	--	18.00J	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--	--	1.00J
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--	22.00J	--
gamma-Chlordane	--	--	--	--	--	--	--	--	--	--	--	7.00J	--
Aroclor-1260	--	--	--	--	--	550.00J	--	--	--	--	--	--	--
INORGANICS													
Aluminum	--	--	80.00B	175.00	162.00	8000.00	4200.00	6300.00	16600.00	5200.00	1470.00	8400.00	3200.00
Antimony	--	--	--	--	--	4.60	1.2	--	0.60B	--	--	0.60B	--
Arsenic	3.00B	--	51.00	--	--	1.70B	0.9B	2.20	8.60	3.50	1.8	11.00	3.00
Barium	240.00	47.00B	690.00	43.00B	43.00B	200.00	74.00	66.00	170.00	61.00	22.00B	98.00	74.00
Beryllium	--	--	--	--	--	--	--	0.50B	1.40	0.50	0.30B	0.80B	0.41B
Cadmium	--	--	2.00B	--	15.00B	--	--	3.60	9.30	3.00	0.80B	7.60	1.70
Calcium	155000.00	115000.00B	110000.00B	99000.00	98000.00	20700.00	4600.00	11200.00	34900.00	3640.00	3900.00	18700.00	4100.00
Chromium	8.00B	5.60B	8.00B	6.00B	5.80B	33.00	16.00	16.00	28.00	8.90	3.60	18.00	4.70
Cobalt	2.40B	1.80B	10.00	2.80	3.20B	2.10B	--	--	14.00	4.90B	0.90B	7.90B	3.00B
Copper	--	2.00B	--	2.40B	2.40B	120.00	45.00	14.00	51.00	10.00B	7.40	32.00	7.70
Iron	13500.00	336.00B	14000.00B	317.00	313.00	4900.00	3000.00	12600.00	32600.00	13500.00	3100.00	24700.00	6700.00
Lead	1.00B	--	--	--	--	150.00	56.00	32.00	65.00	13.00	20.00	85.00	45.00
Magnesium	6800.00	45700.00	67000.00B	41000.00	41000.00	2200.00B	1160.00B	6900.00B	12800.00	13000.00	1700.00	6700.00	1500.00
Manganese	187.00	4.60B	220.00B	15.00B	15.00B	560.00	150.00	370.00	1100.00	580.00	44.00	600.00	370.00
Mercury	--	--	--	--	--	0.16	0.17	--	0.15	0.11	--	0.14	.02B
Nickel	--	--	27.00B	--	--	7.10B	2.9B	11.00	29.00	10.00	12.00	34.00	5.80B
Potassium	29000.00	380.00B	4300.00B	1300.00B	1300.00B	--	--	680.00B	1500.00	320.00B	120.00B	1100.00B	550.00B
Silver	--	--	--	--	2.30	--	--	--	--	--	--	--	--
Sodium	19000.00	128000.00B	89000.00	11000.00	11000.00	390.00	1000B	230.00B	160.00	150.00B	--	--	--
Thallium	--	--	--	--	--	--	--	--	0.30	--	--	--	--
Vanadium	--	--	--	--	--	11.00B	7.7B	16.00	36.00	9.50B	19.00	22.00	8.70B
Zinc	12.00B	--	--	--	--	570.00	140.00	71.00	250.00	51.00	58.00	250.00	58.00
Cyanide	--	--	--	--	--	43.00	10.6	--	--	--	--	--	--
Sulfate	219000.00	68000.00B	36000.00B	85000.00	88000.00	--	--	--	--	--	--	--	--

-- indicates compound was analyzed but not detected.

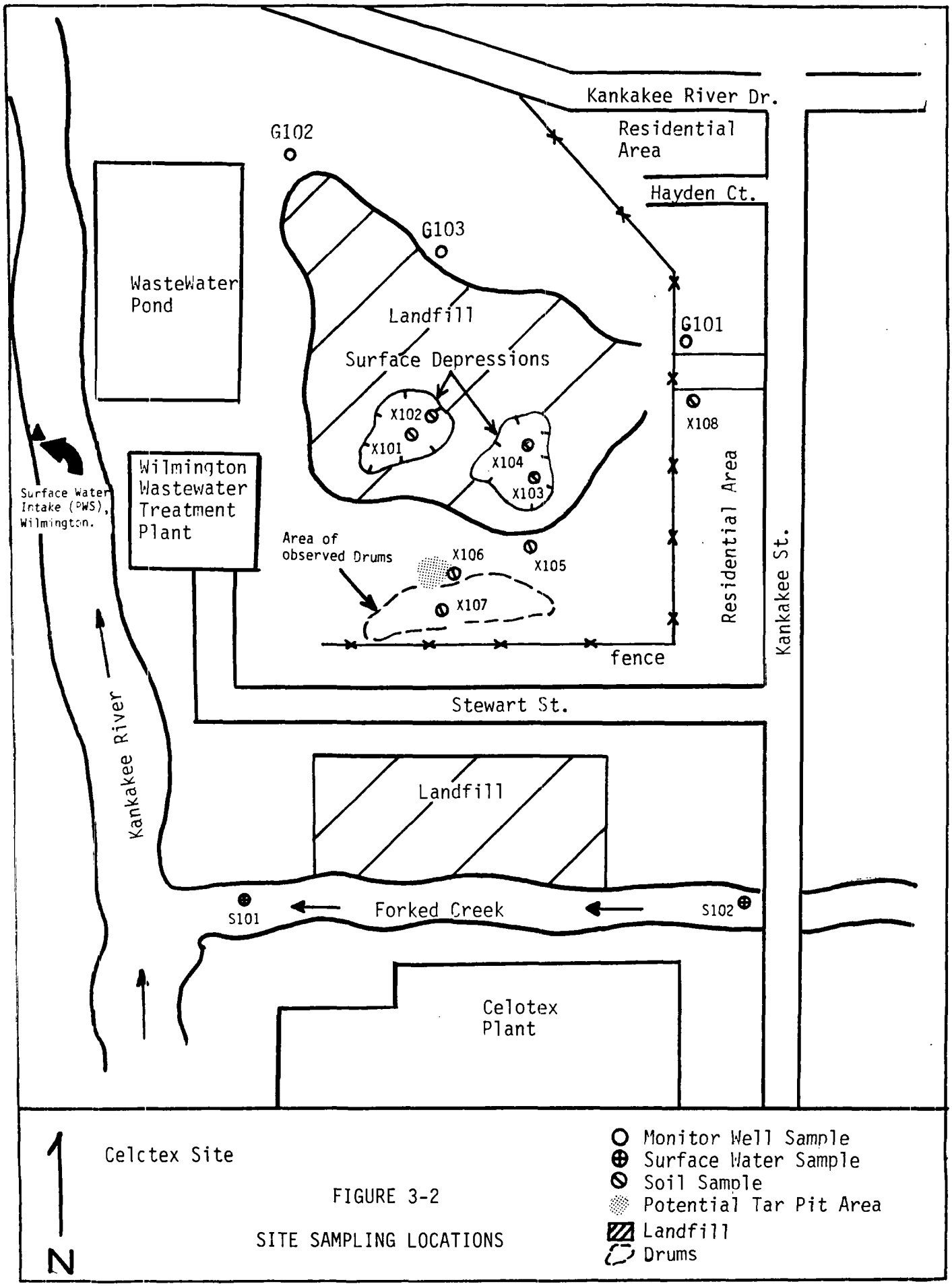


FIGURE 3-2

SITE SAMPLING LOCATIONS

Map not to Scale